

National Aeronautics and Space Administration Advisory Council



Audit, Finance, and Analysis Committee

April 28, 2010

Members:

Mr. Robert Hanisee, Chairman

Hon. William Campbell

Hon. Michael Montelongo

Dr. Howard Stanislawski

Mr. Jeffrey Steinhoff



Audit, Finance & Analysis Committee

Abridged Agenda

- *JSC Center CFO Update*
- *Shuttle Transition*
- *Earned Value Management*
- *General Financial Statement Audit Update*
- *Property Valuation*
- *Unfunded Environmental Liabilities*
- *Joint Confidence Level (JCL) processes*
- *GAO High Risk List*



JSC CFO Presentation

Dot Swanson – JSC CFO

FY 2011 President's Budget Impact on JSC

- International Space Station
 - add \$43B over 5 years – extend life to 2020
- Flagship Technology Demonstrations
 - manage \$6B over 5 years-to demonstrate transformational technologies
- Commercial Crew Development
 - facilitate private industry development of crew transport (LEO) – KSC program office



JSC CFO Presentation

FY 2011 President's Budget Impact on JSC

- Commercial Cargo Augmentation
 - add \$312M (FY11) to expand development of cargo flights to the ISS
- Constellation
 - restructure and develop Orion to provide emergency escape capabilities
- Transition of Constellation program
 - \$2.5B funding (FY11 – 12) for Agency closeout of programs
 - Constellation uncertainty puts JSC in a dilemma

Shuttle Transition Update

Major Space Shuttle Program Facilities

Reusable Solid Rocket Motor
ATK Thiokol Propulsion
Brigham City, Utah



NASA MSFC
Huntsville, AL
- Shuttle Projects Office
- SSME - ET
- SRB - RSRM



EVA Suits
Hamilton Sundstrand
Winsor Locks, CT

NASA Headquarters
Washington, D.C.

NASA KSC
Kennedy Space Center, FL
- Launch & Landing
- NASA Shuttle Log. Depot
- Solid Rocket Booster
- United Space Alliance (USA)

NASA SSC
Bay St. Louis, MS
- SSME Test

Alternate Turbo Pumps
Pratt & Whitney
West Palm Beach, FL

External Tank
LMCO
Michoud Assembly Fac.
New Orleans, LA

NASA JSC
Houston, Texas
- Shuttle Program Office
- Program Integration
- Space Shuttle Veh. Eng. Office
(FSW, FCE, ORB, RMS)
- United Space Alliance - SFOC

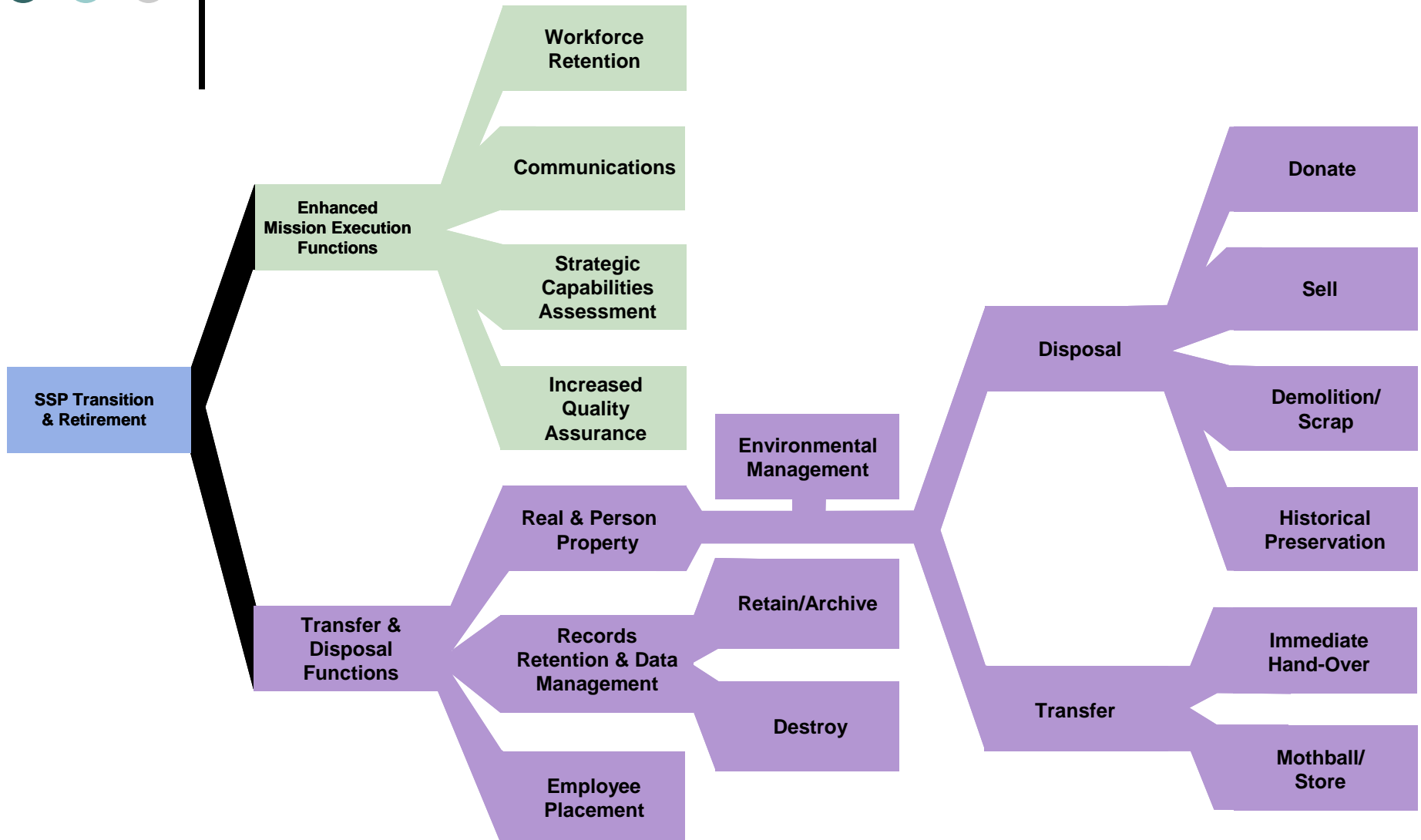
Space Shuttle
Main Engines
Pratt & Whitney/Rocketdyne
Canoga Park, CA

Alternate Landing Site
Edwards AFB, CA



Shuttle Transition Update

SSP T&R Planning since 2005





Shuttle Transition Update

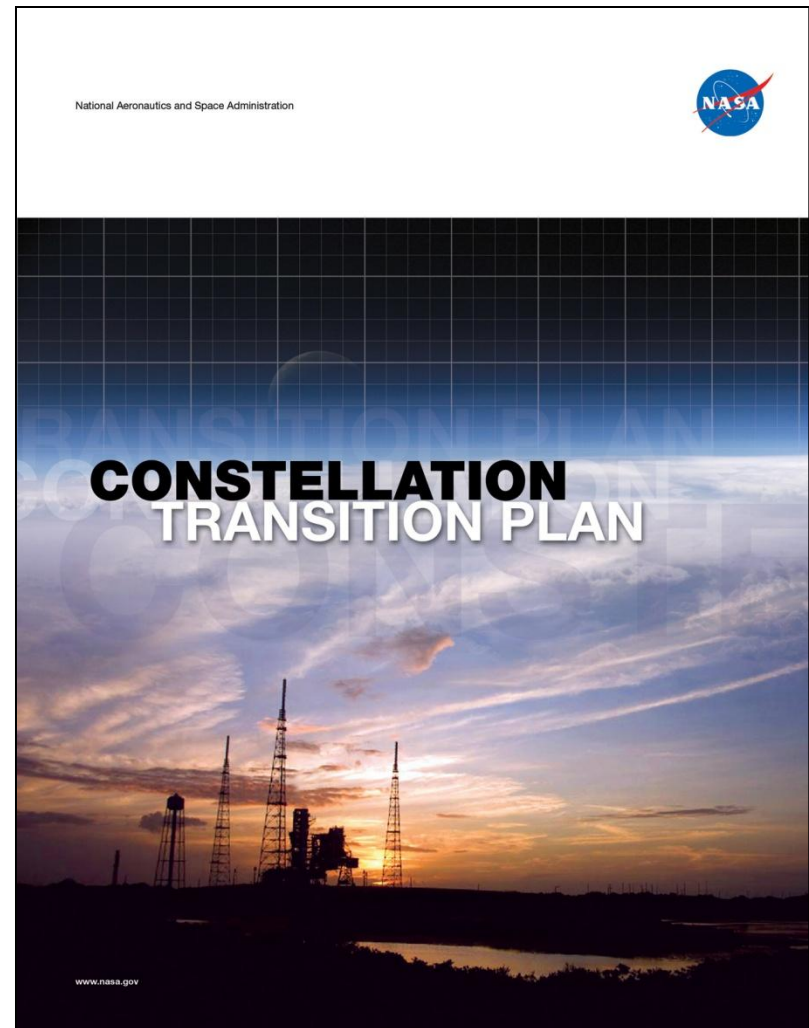
SSP-to-CxP Property Transfers as of August 2009

Shuttle Hardware	Line Items	% Requested by CxP	Line Items Requested by CxP	% Not Requested by Cx	Line Items Not Requested by Cx	% Pending	Line Items Pending
RSRM	202,000	91%	183,820	9%	18,180	0%	0
SRB	48,000	67%	32,160	33%	15,840	0%	0
ET Tooling	10,000	0%	0	0%	0	100%	10,000
MSFC SSME	131,000	1%	1,310	98%	128,380	1%	1,310
SSC SSME Test	8,000	85%	6,800	15%	1,200	0%	0
Orbiter Element	71,000	0%	0	100%	71,000	0%	0
Integrated Logistics	272,000	3%	8,160	97%	263,840	0%	0
Ground Ops Equipment	23,000	0%	0	0%	0	100%	23,000
Flight Crew Equipment	115,000	84%	96,600	16%	18,400	0%	0
White Sands Test Facility	13,000	0%	0	100%	13,000	0%	0
Orbiter Project Office MAF Items	32,000	0%	0	100%	32,000	0%	0

Shuttle Transition Update

Coordination with Constellation Transition Planning

1. Near term FY10 actions
 - Policy Clarifications and Decisions
 - Contracts
 - Deliverables
 - Workforce and Facilities
 - Actions & Knowledge Capture
2. Primary Termination of CxP in FY11
 - Contracts
 - Deliverables
 - Facilities/Services
 - Knowledge Capture/Data Storage
 - Off-ramp of content to rest of Agency
 - Skills/Abilities retention targets
 - CMO
 - Personnel
 - Facilities
3. Transition and Closeout, Transfer to New Initiative Areas
 - New Program/Project Plan Alignment
 - Allocations of content to Agency Directorates/Programs/Portfolios
 - Facilities
 - Personnel
 - Services
 - Skills
 - Contracts modifications/sizing





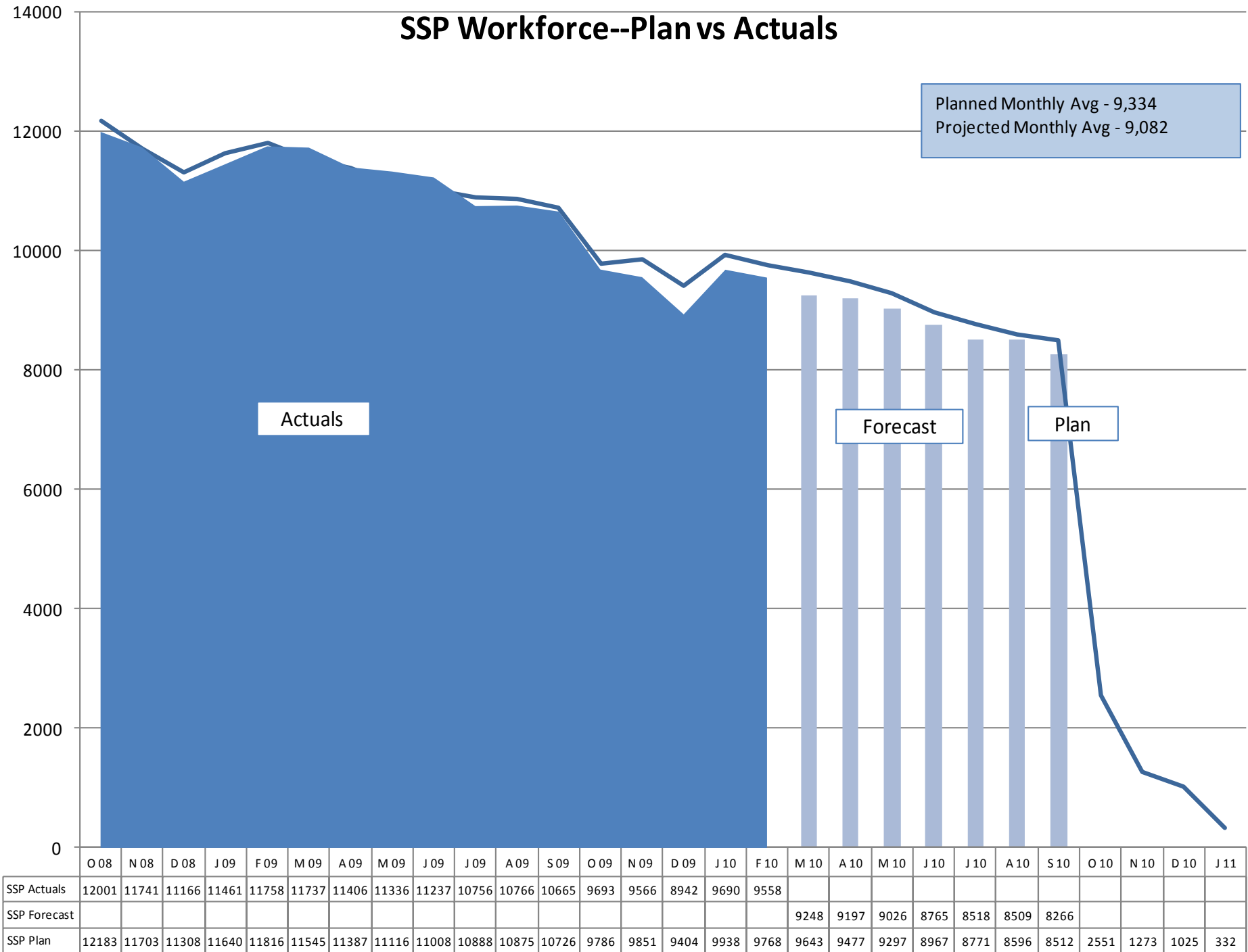
Shuttle Transition Update

SSP-to-ISS Property Transfers as of August 2009

Shuttle Hardware	Approx # pieces	Execution Plan	Update TPA
Logistics/EEE Parts	131	Orbiter will transfer to ISS Vehicle Office (Boeing)	Futron work with ISS (Boeing) to update
FCE	2500	As part of the current procurement (SEB underway)	No
EVA	9500	All on same contract. JSC/XA (Randy Robinson) will execute.	N/A
Materials – Beta cloth	TBD	TBD – ISS M&P revisiting need	TBD
LiOH Canisters	242	Orbiter/Integrated Logistics will transfer to ISS Vehicle Office (Boeing)	Futron to update
EA GFE	16500	JSC/EA (Barry Plante) will retag items as ISS	TBD

SSP Workforce--Plan vs Actuals

Planned Monthly Avg - 9,334
Projected Monthly Avg - 9,082





Shuttle Transition Update

Shuttle Contractor Layoffs

Layoff Dates		Warn		#Reduced (vol & invol)	Notes
		Date	Number		
LM	October 2008			40	
LM	February 2009	December 2008	19	112	
LM	May 2009	February 2008	160	176	
LM	June 26, 2009	April 23, 2009	61	86	
	July 2, 2009	April 30, 2009	33	51	
LM	June 30, 2009	April 29, 2009	190 (MOM)	228	Jacobs hired 164 MOM emp + 28 other LM emp
LM	October 2009	July 27 – 31, 2009	125~	53 laid off 72 other 6 (10/30)	72 other includes voluntary attrition and those placed in other parts of the company
LM	January 29, 2010	November 16-20, 2009	147	93	
LM	February 26, 2010	December 14-18, 2009	40	40	
LM	March 26, 2010	January 2010	40	30	
PWR	Oct 2009	No WARN, Ltr to employees	20	46	CP-31, WPB-14, SSC-1 Retired-12, Laid off-31
ATK	April 2009	No WARN, Ltr to employees		50	Completed
ATK	October 2009	No WARN, Ltr to employees 7/24/09	370 (Shuttle)	264 direct 104 indirect	Shuttle directs reduced by 414—264 laid off and 150 placed. Plus 104 indirects laid off
ATK	January 2010	No WARN, Ltr to employees	450~		Directs and indirects
USA	Oct 2009	No WARN, Ltr to employees 7/14/09	400-	280 FL 96 TX	Self nominated—FL 258, TX 51 Invol Layoffs—FL 22; TX 45



Shuttle Transition Update

Recap of SSP Human Capital Activities

Planning

- Benchmarked—Titan, BRAC, Boeing, NAVASEA, etc
- Formed the HC Working Group including from KSC, MSFC, SSC, JSC, and HQs in 8/05
- Submitted Shuttle HC Plan to Congress 4/06
- Assessed initial Contractor and Center HC Plans in Fall 06
- Assessed the Contractor and Center HC Plans at the “1 year mark” every year
- Split “Retention of Critical Skills for Fly Out” into 2 risks—contractor and civil service—both are currently “yellow”

Skills Management/Assessment

- Participated in Agency effort to “map” employee skills from Shuttle and/or ISS to CX—civil service and contractor
- Developing a “Job Tool” to plan at the FTE level and help match to employees to new positions



NASA Earned Value Management (EVM) Update

What is EVM?

- Tool/technique/methodology/process that monitors, tracks, and assesses the cost and schedule progress of programs and projects
- A helpful and useful rigorous management tool to create and process data to support effective, informed, and early decision-making and corrective action when required
- Part of the comprehensive “plumbing” NASA is installing to demonstrate it can improve its delivery of projects on time and within budget
- A direct response to the GAO High Risk Corrective Action Plan



NASA Earned Value Management (EVM) Update

Current State of EVM at NASA

- EVM standards and capability vary across the Centers
- Centers are building EVM capability but none are ANSI/EIA– 748 compliant (except JPL)
- NASA lacks an approach to coordinate necessary business system, policy, and process changes



NASA Earned Value Management (EVM) Update

Future State of EVM at NASA

- Develop and pilot an agency-wide, organic EVM capability to address ANSI/EIA-748 guidelines
 - 1st pilot kicked off at JSC week of April 5, 2010
 - 2nd pilot to begin in October at GSFC
- 21 of 32 guidelines can be met with no changes to existing NASA policies
- Remaining 11 guidelines reveal business system/process gaps
- CFO chairs the steering committee



Property Valuation

Update on NASA's Implementation of SFFAS 35 –

Recap of SFFAS 35

- SFFAS 35, *Estimating the Historical Cost of General Property, Plant, and Equipment*, was issued October 14, 2009.
- The standard clarifies that reasonable estimates of original transaction data historical cost may be used to value general property, plant, and equipment (G-PP&E). Estimates may be based on information such as, but not limited to, budget, appropriations, engineering documents, contractors, or other reports reflecting amounts to be expended.
- The standard amends:
 - SFFAS 6, *Accounting for Property, Plant, and Equipment* (November 1995).
 - SFFAS 23, *Eliminating the Category National Defense Property, Plant, and Equipment* (May 2003).



Property Valuation

Update on NASA's Implementation of SFFAS 35

NASA's Assets at 9/30/2009

	2009 FY 2009 PAR	
	\$ in millions	% of Total Assets
Intragovernmental:		
Fund Balance with Treasury	8,854	37%
Investments	17	0%
Accounts Receivable	216	1%
Total Intragovernmental	<u>\$ 9,087</u>	38%
Accounts Receivable, Net	2	0%
Inventory and Related Property	3,019	13%
Property, Plant and Equipment		
Space Exploration PP&E		
International Space Station	5,698	24%
Space Shuttle	768	3%
Assets Under Construction (ISS)	1,303	6%
Work-in-Process -- Equipment (SSP)	1,180	5%
Total Space Exploration PP&E	<u>\$ 8,949</u>	38%
General PP&E		
Land	122	1%
Structures, Facilities and Leasehold Improvements	1,848	8%
Institutional Equipment	74	0%
Construction in Process	506	2%
Internal Use Software and Development	78	0%
Total General PP&E	<u>2,628</u>	11%
Total PP&E	<u>\$ 11,577</u>	49%
Total Assets	<u><u>\$ 23,685</u></u>	100%

Property Valuation

Update on NASA's Implementation of SFFAS 35

NASA's Assets at 9/30/2009

**2 Critical Areas for
Applying SFFAS 35 in
FY 2010**

		2009 FY 2009 PAR	
		\$ in millions	% of Total Assets
Intragovernmental:			
Fund Balance with Treasury		8,854	37%
Investments		17	0%
Accounts Receivable		216	1%
Total Intragovernmental		\$ 9,087	38%
Accounts Receivable, Net		2	0%
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Total General PP&E		2,628	11%
Total PP&E		\$ 11,577	49%
Total Assets		\$ 23,685	100%



Property Valuation

Update on NASA's Implementation of SFFAS 35

International Space Station (ISS)

- ISS property balances are estimated using a process developed by NASA and Boeing in 2002. This process was approved by NASA auditors at the time, PricewaterhouseCoopers. This process is consistent with SFFAS 35's allowance for estimating historical costs based on contractor reports reflecting amounts expended.
- NASA has made adjustments to the ISS estimation process over time to reflect changes in operations, primarily:
 - Integration and Operations costs were reduced to reflect a change in asset status from *Construction-in-Process* to *Space Exploration Property*. This changed the treatment of costs from capitalizable to expense, and resulted in an adjustment of \$2 billion.
 - Launch costs were overstated, as they reflected costs not associated with incremental launch activities, and resulted in an adjustment of \$8.9 billion.



Property Valuation

Update on NASA's Implementation of SFFAS 35

International Space Station (ISS), cont'd

- OCFO met with OIG/E&Y on February 2 to review and answer questions regarding a binder of supporting processes and transactions (2002 through 2009) that was prepared and presented to OIG/E&Y last year.
 - Following that meeting, OCFO provided additional data, per OIG/E&Y request, including:
 - DCAA findings from Agreed Upon Procedures reviews of Boeing cost and property processes, systems and transactions.
 - Confirmation of recorded property costs against ISS manifests, budgets and contract disbursements.
 - ISS capitalization schedules.
- OIG/E&Y provided OCFO with an additional information request on April 7. OCFO is reviewing that request and compiling its response.



Property Valuation

Update on NASA's Implementation of SFFAS 35

Shuttle – Impacts on Equipment & Inventory

- The valuation of Space Shuttle assets is not being considered under SFFAS 35.
- The Space Shuttle Program is ending in FY 2010.
- All Shuttle-dedicated equipment will be fully depreciated at 9/30/2010, consistent with accounting guidance for discontinued assets.
 - This will reduce Space Exploration Equipment balances by approximately \$1.9 billion.
 - Actual decrease will depend on the value of those assets currently shared with the International Space Station program – these assets will continue to be depreciated over the ISS' useful life.
- All Shuttle inventory (Operating Materials & Supplies) will be rendered obsolete due to program completion, and will be revalued with a net realizable value of \$0.
 - This will reduce NASA's overall inventory balances by approximately \$2 billion.
 - The remaining balance is for inventory supporting ISS and other programs.

Property Valuation

Update on NASA's Implementation of SFFAS 35

Proforma NASA Assets at 9/30/2010

	2010 Projected	
	\$ in millions	% of Total Assets
Intragovernmental:		
Fund Balance with Treasury	8,854	45%
Investments	17	0%
Accounts Receivable	216	1%
Total Intragovernmental	\$ 9,087	46%
Accounts Receivable, Net	2	0%
Inventory and Related Property	1,525	8%
Property, Plant and Equipment		
Space Exploration PP&E		
International Space Station	5,786	30%
Space Shuttle	-	0%
Assets Under Construction (ISS)	351	2%
Work-in-Process -- Equipment (SSP)	-	0%
Total Space Exploration PP&E	\$ 6,137	31%
General PP&E		
Land	122	1%
Structures, Facilities and Leasehold Improvements	2,091	11%
Institutional Equipment	74	0%
Construction in Process	444	2%
Internal Use Software and Development	78	0%
Total General PP&E	2,809	14%
Total PP&E	\$ 8,946	46%
Total Assets	\$ 19,560	100%

Impacted by SFFAS 35

Impacted by Shuttle



Unfunded Environmental Liabilities (UEL) Update

FY 2009 Audit – A Significant Deficiency

Issues Raised

- NASA failed to book UEL's beyond 30 year horizon even when data was available to do so

NASA response – will do so

- NASA failure to book UEL's on newly acquired assets

NASA response –

OCFO and Environmental Division are developing a process for capturing in PP&E environmental liabilities due to additions and deletions from NASA's capital asset inventory



Unfunded Environmental Liabilities (UEL) Update

FY 2009 Financial Statement Audit – A Significant Deficiency

Issues Raised

- E&Y lacked confidence in IDEAL software to accurately capture environmental data

NASA response –

Supplement IDEAL parametric models with user defined estimates (in FY09, UDEs represented about 80% of total liability estimate)

JSC is hosting an environmental liability walk-through by EY beginning April 28



Financial Statement Audit Update

FY 2010 Financial Statement Audit Key Deliverables

- Audit Schedule
- Walkthrough (GSFC, NSSC, HQ)
- Client Assistance List/NASA Audit Tracking System (CAL/NATS) Status
- Sample Selections
- Internal Control Testing (as of 3/31)
 - General Audit
 - PP&E
 - Environmental
 - Information Technology
- Interim Testing (as of 6/30)
- Substantive Testing (as of 9/30)
- Notice of Findings and Recommendations (NFR) (issued throughout the testing cycles)
- Final Report for Inclusion in the Performance and Accountability Report (PAR) (11/15)



Financial Statement Audit Update

Current Audit Activities - FY 2010

Activity

Dates

Walkthrough (Centers and HQ)

3/1 – 4/16/2010

Internal Control Testing (as of 3/31)-General

- GSFC
- ARC, KSC, LaRC, or MSFC (location TBD)
- JSC
- NSSC

5/17 – 5/24/2010

6/1 – 6/4/2010

6/14 – 6/18/2010

6/14 – 7/9/2010

Internal Control Testing-Property

- Locations and Dates TBD

Environmental

- JSC (Walkthrough)
- White Sands (Joint Review Observation)

4/28 – 4/29/2010

6/7 – 6/11/2010

Information Technology

- Competency Center/MSFC
(Onsite Fieldwork begins)

4/26/2010



GAO High-Risk Report

- NASA Acquisition Management on GAO's High-Risk list since 1990
- GAO and OMB now satisfied with NASA approach
- Need to maintain emphasis on improvements and address remaining issues related to increasing the usability of contractor cost data in NASA systems for project management and providing project managers information and flexibility to manage projects at detailed WBS levels
- Need to demonstrate progress in reducing cost/schedule overruns
- Next GAO High-Risk update in January 2011 and more will be known in the next few months as to whether NASA has made enough progress to be removed from the list at that time.



Audit, Finance, and Analysis Committee

Future Activities

- *GAO High Risk List update after June 2010 meeting*
- *EVM Update – review pilot procedures*
- *Open government initiative – NASA response*
- *OCFO initiatives – Beth Robinson*
- *FY2010 Audit Progress*
 - *Meet with IG*
 - *Meet with EY*
- *Strategic Investment Division – OCFO Cynthia Lodge*



Audit, Finance, and Analysis Committee

No specific recommendations at this time.